

REMARKS

In the Office Action dated April 17, 2003, claims 1-30 were pending. Claims 1-30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Klein (U.S. Patent No. 5,968,139) in view of PCI System Architecture (hereinafter the PCI article).

In this response, no claim has been cancelled. Claims 1-3, 5-6, 9-10, 12, 18, and 20-24 have been amended to particularly point out and distinctly claim, in full, clear, concise, and exact terms, the subject matter which Applicant regards as his invention. Thus, claims 1-30 remain pending. No new matter has been added. Reconsideration of this application as amended is respectfully requested.

Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in view of the PCI article. Applicant submits that claims 1-30 of the present application include limitations not disclosed or taught by the cited references. As a result, claims 1-30 are patentable over the cited references.

Specifically, independent claim 1 as amended recites as follows:

1. An apparatus, comprising:
an interface for directly coupling to a host bus having one or more processors;
a device coupled to the interface to perform one or more functions, said device appearing as a virtual PCI device logically residing on a PCI bus that is coupled to the host bus through a host-to-PCI bridge; and
a monitor circuit coupled to said interface and said device to track host bus cycles initiated by at least one of the processors coupled to the host bus, to identify processor initiated host bus cycles targeted to the virtual PCI device, and to generate one or more control signals to enable the device to respond, as the virtual PCI device, to said one or more of said identified host bus cycles targeted to said virtual PCI device.

Independent claim 1 includes limitations of an interface that directly coupling the apparatus to a host bus (e.g., a processor bus "north" of the primary PCI bus) having one or

more processors, a device which appears as a virtual PCI device on a PCI bus behind a host-to-PCI bridge (e.g., “south” of the primary PCI bus), and a monitor circuit to intercept the host bus cycles targeted to the virtual PCI device which represents the device coupled to the host bus and to enable the device to respond to the host bus cycles. Applicant submits that none of the cited references discloses the above limitations, individually or in combination.

Both Klein and the PCI article disclose a traditional PCI system that all PCI devices are coupled to one or more PCI buses that are coupled to the primary PCI bus (e.g., “south” of the primary PCI bus). The primary PCI bus is then coupled to the host bus through a host-to-PCI bridge. None of the cited references discloses or suggests a device, similar to a PCI device, operating directly on the host bus and the device appears (in terms of a PCI controller) as a virtual PCI device logically residing at one of the PCI bus behind (e.g., “south” of) the primary PCI bus. Therefore, for reasons discussed above, independent claim 1 is patentable over the cited references.

Similarly, independent claims 12, 18, and 24 include limitations similar to those claimed in claim 1. Therefore, for reasons similar to those discussed above, independent claims 12, 18, and 24 are patentable over the cited references.

The rest of the claims depend from one of the above independent claims, thus include all of the distinct features of the respective independent claim, and therefore, for the reasons similar to those discussed above, are patentable over the cited references.

Conclusion

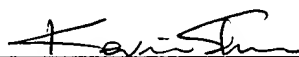
In view of the foregoing, Applicant respectfully submits the present application is now in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call the undersigned attorney at (408) 720-8300.

Please charge Deposit Account No. 02-2666 for any shortage of fees in connection with this response.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Date: 7/17, 2003



Kevin G. Shao
Reg. No. 45,095

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025-1026
(408) 720-8300